International Development Research Centre

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EVALUATION REPORT OF

THE CARIBBEAN TECHNOLOGICAL CONSULTANCY SERVICES

(CTCS)

CTCS Network Project (1985-1988)

Office of Planning and Evaluation
Bureau de la planification et de l'évaluation

P.O. Box/C.P. 8500
Ottawa, Canada
K1G 3H9

CANADA

EVALUATION REPORT OF

THE CARIBBEAN TECHNOLOGICAL CONSULTANCY SERVICES

(CTCS)

CTCS Network Project (1985-1988)

(A project of IDRC/CDB)

prepared for
The International Development Research Centre
(Information Sciences)

Submitted by
Stanley M.J. Lau
Industrial Consultant

July 1989

EVALUATION REPORT

OF

THE CARIBBEAN TECHNOLOGICAL CONSULTANCY SERVICES (CTCS)

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Date: APRIL 1989

TABLE OF CONTENTS

LIST OF APPENDICES

I. TERMS OF REFERENCE

The Consultant is required to

i. Travel to Barbados to meet with the management of the Caribbean Development Bank (CDB) and the staff of the Caribbean Technological Consultancy Service (CTCS).

ii Travel to Jamaica to interview resource persons who have worked for CTCS.

iii Travel to St. Kitts/Nevis, Antigua, Dominica, Grenada to meet with users of the service.

The consultant is to broadly evaluate the impact (both in quantitative and qualitative terms) of the Centre - supported "Caribbean Technology Consultancy Services Network" project since its inception in 1985 to the present and make recommendations for future action. Specifically, the consultant should:

a. Assess the overall effectiveness of the programme and the project's operational activities;

b. Examine the Cost-effectiveness of the services;

c. Comment on the fee structure;

d. Advise on the technical reliability and appropriateness;

e. Examine the use of data bases and Information Handling;

f. Analyze timeliness and duration of visits;

g. Comment on such aspects as the consultant deems appropriate to the good working of the project, such as state of training, human skills and qualifications.

h. Carry out any other tasks requested as deemed necessary by the Director of the Information Services Division; and

g. Submit a detailed and satisfactory report of the work accomplished to the Director of the Information Sciences Division of the Centre.

II. SUMMARY

(A) Data Collection

Input Data and Information for analysing and evaluating the performance of the CTCS Network project were sourced from the following:

(1) Thirteen (13) resource consultants who have performed consultancy assignments in nine (9) OECS and regional countries and in five of the key economic sectors with the highest demand for 'field' technical assignments.

(2) Twelve (12) liaison officers (Investment Analysts/Loan Officers) from the Development Banks and financing Institutions in four (4) OECS countries.

(3) Five (5) staff members from the CTCS Network project and CDB's projects department.

(4) Twenty-four (24) users/clients of the CTCS Network project services.

The survey thus attempted to determine the above persons' knowledge of issues covered in the questionnaire, their perceptions and their opinions and feelings through a carefully designed questionnaire which was administered in person through interviews. As far as was possible under the particular circumstances at the time, the appropriateness of the sample of users was assured on the basis of the sectors with the highest demand. Responses to the questionnaire were substantiated and corroborated as to the objectivity of the responses and by supplementary questions, where necessary.

(B) Aspects of Effectiveness and Efficiency of the CTCS project

1. The performance of the CTCS Network Project is evaluated in terms of effectiveness and efficiency. The effectiveness of the CTCS

Network project is discussed in terms of the overall and specific objectives (see Section II, B) that were set out in the Memorandum of Grant Conditions between the International Development Research Centre and the Caribbean Development Bank, that is the degree of accomplishment of the stated objectives.

While effectiveness is obviously a pre-eminent criterion, because of the need to be assured that the CTCS Network project was accomplishing appropriate objectives (i.e. 'doing the right things'), the need for efficiency is not to be overlooked. Efficiency of the project's operational activities was evaluated on the basis of how the CTCS Network project achieved their objectives with minimisation of Inputs (Resource Consultant's time and financial resources) or how the CTCS unit maximized its level of goal achievement with the given set of resources.

2. A resource base of at least one hundred and nineteen individual consultants and institutions are registered with the CTCS Network project. This resource base, when activated by the CTCS Network project, has initiated the appropriate technological changes and has assisted in the transfer of, or adaptation of technology to micro, small-scale and medium scale businesses and industries in the OECS countries.

The "Network for sharing skills and information on industrial matters between Caribbean countries" is a source of good opportunities and will continue to have a profound impact on firms' successful operations and development by positively influencing their advancements in both product and process technology in ten identified economic sectors. Several members of this resource base are widely dispersed

throughout the Caribbean - in the faculties of the regional University and Industrial Laboratories and Industries of the relatively more developed countries in the Caribbean and are au courant with the Region's needs, opportunities and its general technological, economic and socio-cultural environment.

3. The scope of the CTCS Network services has been provided to the following sub-sectors:

(i) PRIVATE FOR-PROFIT - Micro, small scale and medium scale enterprises, dependent on either domestic or sub-regional market environment.

(ii) PRIVATE NON-PROFIT - Organizations like the National Development Foundations dependent on contributions and/or grants from International agencies, government, but constituted outside of governmental authority.

(iii) PRIVATE QUASI-PUBLIC - Development Banks and Development Finance organisations.

4. Most of the technological services inclusive of advice and information are provided to micro and small scale enterprises. These sectors are, in the majority of cases, the only avenues for indigenous entrepreneurs and job creation with a minimum of Investment outlay, when compared to medium sized, large firms and State Enterprises.

While the large firms have a wide array of assistance in the form of foreign licensing agreements, franchising, management contracts, turnkey contracts and joint ventures; the small scale enterprises have to rely on practical knowhow and training of their human resources from CTCS resource consultants.

The range of technological services include feasibility studies and implementation assistance for new entrepreneurs and enterprises and provision of productivity improvement services to existing enterprises. The latter include employee-based, product and shop-floor based productivity improvement techniques.

5. The efficiency or cost-effectiveness of the services offered by the CTCS Network was compared to the programme of technical assistance by an International Agency operating in the small scale industries sector. Cost per assignment for the CTCS Network project is estimated to be 50% for a similar assignment performed by the International Agency.

(C) Consulting Fee Structure/Clients' Contribution

1. The original guideline in this context was 'to make available to industrial enterprises, at the lowest possible cost, a wide range of key technological advice and information to which they now have little or no access at the national level for improved productivity, quality, pricing and marketing'.

Inherent in this guideline is the fundamental socio-economic purpose and basic thrust of the CTCS's network project mission. The consulting charge, at the lowest possible cost, reflected the view that small businesses have liquidity problems, and debt/equity ratios are such that in their formative years they typically have very small equity bases and can not access other loans.

However, to maximise the productivity of the budgeted funds of the CTCS Network project in terms of increasing consulting assignment per subsidized assignment cost, the following alternatives are offered:

(i) Share cost between the CTCS Network project and client on each assignment. A five day assignment cost US $1600 and a ten day assignment US $3200. Most of the assignments fall into these Bi-Modal classes. Currently, each client is charged $750 in the currency of the country in which the assignment is performed.

(ii) The CTCS unit bears the 'set-up' costs of airfare and honorarium of US $100/day for the consultant and the client bears the expenses of Board and Lodge for the consultant.

(D) Technical Reliability and Appropriateness of CTCS Network Project Services

The quality of the consultants' expertise and problem solving capability in the field is attested to by the high degree of satisfaction of seventy-five percent of the assignments audited in the sample survey.

The responses reflected the degree of fitness or suitability of the consultants for the particular assignment and indication of the measure of the satisfaction of client's needs.

However, for benefits of any consultancy assignment to be passed on as part of the learning and development process of entrepreneurs, one of the objectives of the CTCS's services should be to help the micro or small scale entrepreneur to help himself. Alternatives suggested in (C) should promote greater self dependence among entrepreneurs by encouraging greater attempts at problem solving in recurring relatively simple type problems.

Workshops for upgrading the resource consultants to that of 'process consultants' are necessary in some sectors. The process consultants will be concerned with passing on his approach, methods and

values so that the enterprise itself can diagnose and remedy some of its recurring type problems.

(E) Validation of the Role of the CTCS Network Project

The overall socio-economic purpose of the project (CTCS Network) as reflected in the Statement of Overall Objective is 'to increase the capacity of Caribbean countries to meet their technological requirements for efficient operation of existing industries and the development of new productive enterprises which create employment, earn foreign exchange or contribute to increasing growth in the region'.

Thus the role of the CTCS project is valid because the project continues to satisfy and work towards these basic purposes. The potential and future contributions of micro, small scale and medium-sized enterprises to the socio-economic goals of the Caribbean countries and individual nation's economy in terms of productive output and job creation at low cost is a sine qua non in consideration of any development plans and programmes. The low volume English speaking Caribbean market of four to five million people (with approximately 20% in the sub-regional OECS grouping) with widely varying purchasing power, places a size constraint on the size of enterprises hoping to benefit from economies of scale. However, as is evidenced by the survey, micro and small scale enterprises have a natural fit in this regional environment. This includes the ability to fill limited demands in small island economies (e.g. agro-industrial and food processing); flexibility to adapt rapidly to special conditions (e.g. garment industries); and a propensity for labour intensive, high skill precision work (as in handicraft/artisan type skills).

These small scale enterprises are generally dependent upon the existing infrastructure and have a multiplicity of handicaps and needs in all functional areas - capital/loan financing, marketing,

quality/standards, technical skills and lack of access to technological information and appropriate technology.

In the Caribbean sub-region of the OECS countries, the local parastatal agencies and Chamber of Commerce provide partial assistance and services in capital/financing, marketing and general business practices. But there is a technological hiatus in the provision of services by the aforementioned organizations and this has been the raison d'etre for the CTCS Network in fulfilling this need.

Thus the mission statement, as explicitly stated, provides critical premises for the CTCS's work programme and its existence within the organizational structure of the CDB.

A Mission Statement that is appropriate to the evolving and future work of the CTCS Network can be summarized in the following:

To create and expand the technological possibilities of the micro, small and medium scale industrial enterprises in Caribbean countries in general, but in the less developed countries in particular,

By providing technological information (of opportunity studies/pre-feasibility studies, feasibility studies/general and specific product and process information, etc.) that is appropriate for indigenous industrial development (i.e. stimulating and developing indigenous entrepreneurs), and

Information work methods and basic productivity improvement techniques (technology-based, employee-based, task-based, product-based, etc.) that have been successfully introduced in other plants in the Caribbean,

Through industrial extension and liaison services, in-plant consultancy and implementation assistance, in-plant training,

workshops/seminar, etc.

The network of knowledge and skills based resource that are registered with the CTCS project can be further expanded and strengthened in performance of the above activities under the co-ordination of the CTCS 'unit'.

It is to be noted that although the technological thrust will be unique to the CTCS unit, packages of technical assistance to small scale enterprises have managerial and business elements that are inextricably intertwined. Hence the leading edge is technological but support from such enterprises in other functional areas are necessary.

III. INTRODUCTION AND PROCEDURE

(A) This section of the report maps out the procedure and approach used by the consultant in the programme of visits and discussions and interviews as required by the Terms of Reference.

The consultant in order to secure the maximum and relevant amount of information and coverage, held preliminary discussions with the Management and Officers of the Caribbean Development Bank (CDB) and the staff of the Caribbean Technological Consultancy Services (CTCS) network.

The Records and Reports perused, consisted of annual reports, computer printouts. client files, other CTCS reports and publications. Other information of events and conditions (stored in the minds of the CTCS network extension officers) of field experience in providing technical assistance, proved useful. Although a questionnaire was developed for structured questioning in interviews, responses of interviewees were also tested and elaborated on where necessary or relevant. Thus other questions not formally recorded on the questionnaire were used to supplement, support and confirm or correct previous responses by interviewees.

The Management of the CTCS Network project are of the view that the overall and specific objectives are still valid and desirable and the statement of objectives is reiterated for ease of reference in sub-section B.

The role of the CTCS Network project can be viewed in perspective in sub-section C as excerpted from papers presented by management to external audiences, seminars/conferences.

In identifying and selecting suitable and acceptable measures of effectiveness of the programme and project's operational activities, the consultant searched for congruent areas in the various perspectives of:

1. CTCS Network staff and extension officers
2. Clients/users view of the benefits received and the
3. Resource persons or consultants' point of view.

For example, the CTCS Management and Extension Officers saw the effectiveness of the unit in terms of number of technical assistance solutions delivered in the field; the client, that the eventual benefit would eventually improve his profitability/cash flow situation; the Resource Consultant, that he has assisted a firm to survive by correcting a deteriorating situation or assisting the client to grow and expand or develop a totally new situation requiring a creative solution.

The programme of visits and discussions and interviews is attached as Appendix I.

The questionnaire for the field interviews is attached as Appendix II.

(b) Statement of Overall and Specific Objectives

The general and specific objectives of the project entitled, "Caribbean Technological Consultancy Services Network (CTCS)" is set out in the Memorandum of Grant Conditions between the INTERNATIONAL DEVELOPMENT RESEARCH CENTRE and the CARIBBEAN DEVELOPMENT BANK.

The overall objective of the Project (CTCS Network) is to increase the capacity of Caribbean countries to meet their technological requirements for efficient operation of existing industries and the development of new productive enterprises which create employment, earn foreign exchange or contribute to increasing growth in the region.

The specific objectives of the project are as follows:

a. To establish a network for sharing skills and information on industrial matters between Caribbean countries which can then be eventually self-supporting;

b. To provide industrial information support to national information nodes;

c. To make available to industrial enterprises, at the lowest possible cost, a wide range of key technological advice and information to which they now have little or no access at the national level, for improved productivity, quality, pricing and marketing;

d. To provide practical know-how to local endeavours and opportunities in the industrial field;

e. To permanently increase national skills by facilitating transfer of knowledge; and

f. To train local human resources.

(C) Excerpts: Perspective on the Role of the CTCS Network Project

1. Technical Assistance Operations and Programmes, Caribbean Development Bank, paper prepared for the consultation and co-ordination meeting between Latin American business organizations and international cooperation agencies, August 1988.

The CTCS network, established by the Bank in 1982, provides a mechanism by which the knowledge and skills already accumulated but scattered through the bank's member countries can be mobilized and applied to the needs of Caribbean industry, and where appropriate, adapted and transferred to productive enterprises. CDB has operated the Network with co-funding from the United States Agency for International

Development (USAID), the United Nations Development Programme (UNDP) and the International Development Research Centre (IDRC) of Canada.

CTCS is organized as an informal cooperative association of technological institutions, universities, information centres, development banks and individual specialists of the region. CDB coordinates and administers the Network's programme, which offers the services of qualified and experienced specialists to assist the small to medium sized manufacturers in overcoming technical problems. For a fee of $750 local currency a small or medium sized business can obtain the services of one of these specialists for up to 15 working days. CDB pays the return airfare (economy) of the specialist, a per diem to cover living expenses and an honorarium of US $100 per working day. Since the inception of the CTCS Network, consultancy services have been provided to approximately 200 businesses, in addition to responding to over 600 individual requests for information. In 1987 alone 53 field consultancy visits were conducted and for the first six months of 1988 this figure has already been exceeded. The increasing demand placed on the CTCS is a clear indication of the degree to which the service is filling a need among the Region's small and medium sized entrepreneurs.

2. Paper presented to Second Development Finance Corporations' Seminar for challenge of providing Cost Effective Technical Assistance to Small and Medium Sized Private Sector Development Project - Dellimore, June 1988.

There are two underlying principles which are never compromised in sound and effective technical assistance operations. Firstly:

(1) They play a catalytic role in development projects; i.e. a

relatively small technical assistance input generates major qualitative and quantitative changes in the overall performance of the benefitting enterprise.

For example, a TA assignment to train staff in a manufacturing facility in proper equipment maintenance and operation might cost only $3,000 but it could reduce maintenance costs by, say, $10,000/yr and increase plant output by, say, 15% and profits by as much as 30% from, say, $200,000/yr to $260,000/yr, because of its impact on down-time, materials losses, worker productivity, etc. Thus, a once-and-for-all investment of only $3,000 could over a five-year period earn $300,000 - $100 for every $1 invested! Few legitimate investments other than technical assistance could generate such returns; and the above estimates are conservative. Secondly:

(2) They do not have to be repeated because they transfer capabilities to continue the process initiated by the assistance provided.

This is, by far, the most difficult condition to achieve, because many factors including Donor and Beneficiary attitudes and values often work against the transfer process.

The Technical Assistance Agency or In-House Task Force

Creation of an in-house Task Force or technical assistance agency to deliver technical assistance and to conduct company operations audits of borrowers and potential borrowers in one or more sectors (to assess general working conditions, technical facilities, operational conditions, products, costs, organisation and management, marketing and financing), identify technical weaknesses and strengths and implement remedial and forward planning measures is a tempting option. Almost

every Caribbean country has tried this approach in one form or other in the agro-industrial subsector. The impact so far is not encouraging. The evidence suggests it is almost impossible to institutionalize the wide range of technical inputs required by small enterprises. In addition, entrepreneurs prefer to receive assistance from 'hands-on' specialists who work in similar business than from 'institutional experts'. For example, the Caribbean Technological Consultancy Services (CTCS) Network, described later, received fifty-three requests for 'Direct' technical assistance in 1987; but only in seven cases (13%) did technical assistance (resource) institutions provide the expertise required. Why? Because the problems are mainly in the area of operating techniques and repair and maintenance which tend to be plant-specific.

Recognising the potential of experienced local specialists as a resource for technical assistance, CDB began an experiment in 1982 to help small and medium-sized enterprises tap this source in solving technical problems. In collaboration with various national technical and development banking institutions, a cooperative network was established to promote development, use and sharing of 'local' expertise in the Region to solve technical problems of small and medium-sized enterprises. The Caribbean Technological Consultancy Services (CTCS) Network pilot project proved a success and went into full operation in mid-1984. It is run by a full-time 'Coordinator' who is assisted by two part-time extension officers. Because of the net-working mechanism this small team is able to mobilise expertise from throughout the Region to provide assistance at a minimal fee of $750 local currency to a large number of enterprises requiring technical assistance. In 1987 it

responded to 53 such requests (plus 144 requests for information).

The main products provided by the CTCS Network are:

(a) a question and answer technical enquiry service;

(b) 'select' information packages on processes or techniques of potential interest to a substantial number of enterprises;

(c) show how or hands-on advisory services by resource persons who travel to the requester's facilities to solve specific problems and train counterparts;

(d) short training courses for technical personnel on specific problem areas;

(e) publication of industry profiles for small enterprises;

(f) publication of an annually updated directory of Resource Persons available through the Network; and

(g) publication of a quarterly newsletter to keep users aware of its activities.

This regional approach to tapping local expertise enjoys considerable success. Surprisingly, a substantial proportion of the 'experts' used are small entrepreneurs in the small type of business as the beneficiary. Many of the 'experts' were themselves trained through technical assistance received from the Network. They are usually quite willing to provide assistance to others who are not in direct competition with them. It is unlikely that an entirely national network could operate in exactly the same way; but establishment of National Networks in conjunction with the regional system would further enhance the access of enterprises to Caribbean expertise.

IV. ANALYSIS OF CATEGORIZED DATA AND EXPRESSED VIEWPOINTS OF CLIENTS OF CTCS PROJECT, FEBRUARY - MARCH, 1989

A. Technical Services Needed by the Micro/Small Scale Enterprises and Medium Scale Industries

The overall objective of the project (CTCS Network) is to increase the capacity of Caribbean countries to meet their technological requirements for efficient operation of existing industries and the development of new productive enterprises which create employment, earn foreign exchange or contribute to increasing growth in the region.

In a broad sense, technical assistance and services include appropriate activities that assist the enterprise's operation and management, whether to prospective entrepreneurs in creating and starting-up new enterprises or upgrading and modernizing existing enterprises. In the present report, the types of assistance which industrial consultants can render can be categorized into five (5) functional classifications.

DESIGN AND ENGINEERING SERVICES

Project feasibility studies; factory and plant design; construction, installation and start-up, preparation of specifications (tenders) for equipment and evaluation of bids.

TECHNOLOGICAL SERVICES

Product design and development; process know-how; raw material specifications; plant layout and production methods; product quality standards and specifications; quality control; packaging.

Part of these services may be relevant research, designed to meet the needs of individual enterprises, thus it may include technological research to solve a specific problem, but not of the type of general technological research.

BUSINESS ECONOMICS AND PROFITABILITY ANALYSES

Project and profitability analysis (break-even analysis, rate of return, NPV, IRR and Bankability Studies). Capital and Operating Budgets, Cost-Price-Profit relationships.

MANAGEMENT SERVICES

Planning and control methods in the functional areas of management - production, accounting and financial, marketing, general management.

IN-PLANT TRAINING PROGRAMMES

Training operatives and maintenance workers. In-plant training for new recruits, supervisors and technicians. The above type of training must be provided in the factory itself and is not the general type of instruction given by a technical training or apprenticeship centre. Thus in examining the technical reliability and appropriateness of the CTCS service, one must appreciate that the above context of technical assistance and services in field practice is more appropriate to the more mature medium-scale industries.

B. Characteristics of Scale of Operations

The clients of the CTCS project exhibited characteristics of size which would categorize these operations as Micro-Enterprises, Small-Scale Enterprises and Medium Scale Enterprises.

Only one of the enterprises, Dominca Coconut Products (with sales of EC$23 million and employing one hundred and sixty five (165) employees and exporting 85-90% of its production to the widest regional markets) possessed sophisticated managerial and technical personnel and formal organizational procedures.

Of the two enterprises that can be classified as medium-scaled (in terms of turnover and numbers employed), the machinery was light

(industrial sewing machines and spooling equipment) and the technological content of the process labour intensive, but with dexterity in manual skill content. One of the medium-scale enterprises was 100% export oriented as the enterprise produced batches under sub-contract for its foreign principal. The other medium-scale enterprise produced for export under the CBI's 807 agreements. However, under these conditions, value added was basically equivalent to salaries and wages of factory workers because there were no local technological inputs (of Design and Engineering, Research and Development, etc.).

It is coincidental that the above three firms were not able to benefit from the use of the CTCS consultancy assignments, although they expressed satisfaction with the assignments.

The Dominica Coconut Products Limited stopped production of coconut oil because it was uneconomical. As a result they did not need the blow moulded containers. The Coiltronics Limited had a change of management and resorted to its principal for its quality control and inspection system. Sun Island clothes had labour problems just prior to the assignment and did not use the time and motion studies as a basis for production standars and pay incentives.

The enterprises that obtained maximum benefits with significant changes and major improvement in all of the functional and business areas of their operations (Technological, economic and management) were the micro and small scale enterprises.

The Characteristics and attributes are wide ranging:

1. Employment varying from four (4) to thirty (30) persons.
2. Equipment - portable power tools and some light machinery and equipment from EC$25,000 to just under EC$500,000.

3. Sales from EC55,000 to just under EC$1,000,000.
4. Neighbourhood market through islandwide to neighbouring island market.
5. Low equity base and loan from National Development Bank/Commerical Banks.
6. Little or no access to technically trained or experienced workforce; or with traditional experience (e.g. in bakery practices) and limited opportunities for information on modernization (without CTCS help).
7. Management is simple and formal record keeping bare (e.g. lack of simplified accounting systems). Associated problems arise, such as cash flow projections even when activities are expanding, poor knowledge of cost-price-profit-volume relationships.

It is in this segment (of Micro and small scale enterprises) in the spectrum of the industrial structure that technical assistance based on an integrated approach of almost total assistance (i.e. technological, management, marketing and accounting etc.,) will be required, as compared to the demand for technical assistance of technology related information for larger enterprises in the Caribbean. Of the two hundred and eleven (211) requests for technical assistance, since the formal inauguration of the CTCS unit, it is suggested that 80-90% might have been requested by micro and small businesses. A somewhat dated statistic from the U.S. Department of Commerce revealed that 89% of the small businesses employed, ten (10) persons and less. Micro and small businesses have become more attractive to talented, entrepreneurial persons.

In the Caribbean, the National Development Foundation has been able to create jobs and work places at EC$2000 per job in some manufacturing operations (woodworking, leather-craft).

However, the care and attention needed for survival by micro and small businesses is revealed in the startling statistics, that of the 500,000 plus new businesses that are born each year in the USA only half live as long as eighteen (18) months, and another 25% eke out an existence at subsistence levels until they die within five years.

But given the low opportunity cost of employment in the Caribbean, it is possible that many micro and small businesses will continue to barely survive and these will need the assistance of the CTCS unit.

It is to be noted that freedom of entrepreneurial opportunity leads to either success or failure and the right to make choices (wrong or right) is the essence of the free enterprise systems. The high failure rate is equally due to ease of entry as to poor management and lack of experience in other business areas.

The general conclusion is that if more than 50% of the two hundred and eleven enterprises that received techical assistance are alive and growing to maturity (hence implying some degree of efficiency and innovation), then this benefit to cost (EC$3000 per technical assistance) is highly desirable as compared to any alternative use of the program funds in question.

C. Requirements - OECS Countries at Earlier Stages of Industrialization

In the OECS countries that are at relatively earlier stages of industrialization, the micro and small scale enterprises prefer 'show-how' demonstration, guidance and assistance in all aspects of

establishment, management and operation. This is particularly appropriate in OECS countries, for the emergence of a new class of entrepreneurs, especially from the indigenous sector of the population.

The CTCS co-ordinator and extension officers have adopted an active attitude and undertake work on their own initiative, acting as Resource Consultants and providing technical conselling including visits and consultations, advice and guidance. They are therefore knowledgeable of the immediate needs and problems of their clientele and have used the effective methods aforementioned to negotiate technical assistance agreements. In another section of this report dealing with the role of the Resource Consultants, two roles, that of Resource Consultant (specialist for specific problem solving usually at shop floor level) and that of Process Consultant, will be more deeply discussed.

The ultimate objective of the CTCS is to help the micro or small scale industrialist or manager to help himself. The Process Consultant is concerned with passing on his approach, methods and values so that the enterprise itself can diagnose and remedy its own problems. The two roles are however, to be seen as mutually supportive and complementary.

In the selection of Resource Consultants for shop floor problems, specific matching characteristics of the problem (in terms of Product, Process, Plant and Machinery and Raw Materials) to the experience of the consultant must be considered.

Many practical consultants with years of experience (usually repetitive) have had their 'hands-on' practice in narrowly specialized areas or special-purpose equipment and cannot easily translate or

transfer their experience into another environment.

One consultant with experience in the printing industry was not able to succeed in his mission in a printing firm where Heidelberg printing presses and equipment was used, but was highly successful in another OECS country in which the client had Swedish 'SOLNA' printing presses.

In a second illustration, the Resource Consultant although having experience of film extrusion process (but at what depth) was unable to properly set the tooling (high precision) for control of the film thickness and width.

From my experience with shop floor problems dealing with product, process, equipment and materials, most of these problems can be identified and solved within half a day to three days (unless a part has to be manufactured).

Paradoxical as it may seem, machine set-up and training of operatives for special purpose machines can also be easily done within three to five days, assuming that the recruits have a basic secondary school education with science subjects or Technical-Vocational subjects (such as Engineering Science, Workshop Technology). Such operative training must be distinguished from the long-term Craftsman Apprenticeship Scheme which takes from three to four years to journeyman status.

D. Conclusions and Recommendations

The 'show-how' type of assistance, demonstration and guidance is necessary in the start-up of operations of micro and small scale enterprises in the Caribbean, but the ultimate objective of any extension agency is to help the micro and small scale entrepreneurs to

attain increasing degrees of self-reliance.

Thus two basic roles of Resource Persons/Consultants are called for as agents of change, one as Resource Consultant and the other as Process Consultant.

Many of the Consultants/Resource persons are capable of assuming both roles as the occasion demands. However, a workshop should be organized to include:

1. Basic roles of Resource/Process Consultant
2. Complementary roles of Consultant/Client
3. Problem definition
4. Types and levels of change
5. An appreciation of the full range of technical assistance and services needed by Micro and Small Scale Enterprises (Design and Engineering, Technological, Economic, Management, Training.

V. ANALYSIS OF THE DATA AND EXPRESSED VIEWS OF THE RESOURCE PERSONS WHO HAVE WORKED FOR CTCS

A. Role and Profile of the Resource Persons

In the sample interviewed in Jamaica, the resource persons manifested qualities and other attributes of higher education and technical training in specialized fields, and experience, that were more than adequate to act as Industrial advisers and professional problem solvers in the traditional and associated fields.

Their background inclusive of expereince and training particularly qualified them to undertake independent unbiased studies of industrial problems (in their field) or to select one of several alternatives courses of action which should be implemented.

The characteristics of the resource persons in the sample interviewed included the following:

At least 80% of the sample possessed

1. A Bachelor's degree and five to nine years of previous experience in a relatively advanced environment, and
2. High strengths in the technological areas and with management experience at least at middle level. Thus they were able to view technological consulting services in the conventional modes, as
   - i. a mechanism for strategically introducing appropriate or relevant technologies for the small scale and medium scale enterprises in the Caribbean to improve productivity and quality of product and efficiency of process, and as
   - ii. a professional service that helps managers to analyse and solve practical problems or transfer successful

techniques and practices from one enterprise to another. To exemplify this latter point, the owner of Dura Chem Manufacturing Limited in Grenada was loud in praises of the capability of Ms.Angela Hochoy of Seprod Limited for the formulations she supplied for the firm's dishwashing liquid, soap powder, etc. She was able to note for him other sources of formulation information.

RESULT: The firm is able to compete in quality and price with Trinidadian firms which are much larger in scale of operations. About 33% of the resource persons interviewed displayed (or rather expressed) familiarity with the various entrepreneurial development approaches which have provided the basis for current small enterprise development practices. They knew of the importance of the interaction of the various functional aspects of an enterprise and that change in one function have influencing repercussions in other functions.

They are aware that micro and small scale enterprise clients in the Caribbean are usually not the best educated and complementary roles of consultant and client are required and the client's self-esteem must be maintained, although they provide the technically oriented assistance.

It must not be misconstrued that the other 67% of the resource persons do not empathize with small scale entrepreneurs. They are aware that in starting up of small business operations, mistakes will happen and it is part of the general learning process and the consultant's task is to minimise the consequences of errors made in the early stages.

One of the consultants, Mr. Rory Peynado, a Civil Engineer, by profession, who has achieved a respectable status with an Engineering Consultancy firm, in order to make his assignment successful, had to

perform some 'hands-on' work to construct 'testing equipment and apparatus' so that his actual assignment (according to the terms of reference) of Quality Control and testing of concrete blocks could be performed.

He and many others have adopted simple styles and approaches to be more effective in obtaining the desired results rather than maintain a professional air and emphasis on intrinsic expertise. They realize that in dealing with small enterprises, a failure on the part of the consultant could keep the enterprise stalled.

B. Other Aspects of the Technical Reliability and Appropriateness of the Services of the Resource Persons/Consultants

In the context of Industrial and Technological Consultancy Services, areas of advice fall into

Design and Engineering

Technological

Business Economics and Management

Training Problems.

The consultant's work begins with some condition that is considered unsatisfactory (as seen by the client) and capable of improvement. The successful assignment ends with a condition in which a change has taken place, a change that must be seen and/or evidenced as an improvement (improved quality by some rational standard, increased profits, etc.).

At least 15-20% of the sample clients were very satisfied and 90% expressed satisfaction with the assignments. The CTCS 'unit' is also incorporating audits of changes in certain conditions, in their evaluation questionnaire of the consultancy assignment.

In some assignments, the consultant has had to master delicate

balancing roles as an agent of change, but maintaining his advisory role and not make delicate decisions on behalf of managers who want the consultant to act on their behalf.

As advisers, the consultant's responsibility is for the quality and integrity of their advice and the consultant must maintain this independence whilst involving the client to perform the implementation.

Strong client-consultant co-operation results in successful joint accomplishment and reflects the quality of the consultant's advice.

One of the resource persons, Ms. Sandra Scott, explained the above situation in one of the assignments which was rated as unsuccessful by the client.

C. The conclusion is that the resource persons in the sample interviewed have a good perspective of the role of consultants, and by their performance in the range, scope and characteristics of their assignments, have demonstrated their appropriateness and technical reliability and competence.

VI. OTHER ASPECTS OF THE PROGRAMME AND PROJECT'S OPERATIONAL ACTIVITIES BASED ON THE PERFORMANCE REPORTS (1985-1988) AND ACTUAL OUTPUTS AND ACTIVITIES OF THE CTCS ENTITY

A. The measures of effectiveness and impact of the CTCS Network, as accepted by the CTCS Steering Committee and Management of the division/section, have been expressed in terms of the major activities and outputs as seen in the Table VI.

Higher values have been attached to the following outputs in relation to others.

(1) Technical enquiries answered by provision of written information.

(2) Technical production problems in industry solved by visits of experts (consultants).

Between the period January 1, 1985 to December 31, 1988, the CTCS Network provided five hundred and forty four (544) technical enquiries answered by provision of written information and managed two hundred and eleven (211) technical production problems in industry solved by visits of resource persons/consultants.

For technical enquiries, the variance between actual (achieved) and proposed (projected) is favourable since there was practically no gap in 1985 and 1986, and the gap in 1987 was compensated for in 1988.

1. For technical field production problems, the cumulative achievement ratio is 70%. This is calculated on actual achievements of two hundred and eleven (211) and a base of three hundred (300) proposed (60 + 70 + 80 + 90). In analyses of variances of budgets expressed in monetary terms, a 10% gap may be considered unfavourable depending on the contingent nature of the budget item. But I would consider a 30%

gap as an acceptable level of performance given the general environmental conditions in the Caribbean and the Manpower Resource Programming within the CTCS unit per se.

2. 33 1/3% of the users requiring information requests have been from small-medium scale industries whilst the others are from infrastructural institutions (government, development finance, research institutes). This statistic reflects the relative degree of development in comparing the small and medium scale industrial sector, and the formal institutional structure, and the different modes of transfer of knowledge.

For enterprises now starting up or in the early (first and second years) years of operation, technical assistance in the mode of problem solving in situ is preferred to communication through correspondence, since many of the owner/managers are now learning to steer the enterprises, and immediate demonstrations and answers can be fed back by the Consultant.

As the firm begins to grow to maturity, attitudinal and behavioral changes may be undertaken by the Process Consultant in devising the appropriate strategy for implementing the proposed change, to using the more economical and time-saving IR mode vis a vis the Field Problem Solving Mode.

TABLE VI

MAJOR ACTIVITIES AND OUTPUTS OF THE NETWORK

PROPOSED/(ACHIEVED)

Outputs	Magnitude of Outputs				
	1985	1986	1987	1988 (Extrapolated)	1988 (Cumulated)
1. Technical Enquiries Answered by Provision of Written Information (Achieved)	80 (78)	92 (97)	105 (76)	119 (93)	396 (544)
2. Technical Production Problems in Industry Solved by Visits of Experts (Achieved)	60 (33)	70 (27)	80 (53)	90 (98)	300 (211)
3. Annual Meeting National Inst. (Achieved)		1	(1)		
4. Meetings Steering Committee (Achieved)	2 (2)	2 (2)	2 (2)		
5. Publications					
(a) Compendium Project Profiles (Achieved)	1 -	1 (1)	1 (1)		
(b) Newsletters (Achieved)	6 (3)	6 (4)	6[2] (4)		
(c) Directory (Achieved)	1 (1)	1 (1)	1 (1)		
(d) Information Packages (Achieved)	3 (3)	4 (4)	3 (3)		

(2) Reduced to 4/year.

Process Consultants can improve the confidence and self-reliance of clients thus optimizing the use of the funds for major, extra-ordinary or unusual problems requiring field visit.

3. Two sectors, Agro-Industry/Food Processing and Energy (NRSE), accounted for 67% of the written information requests. For technical assistance in the field, two sectors - the Industrial Chemicals, Petro-Chemicals and Agro-Industry/Food Processing, accounted for slightly under 60% of the demand.

The nature of consulting requires an outlook for future opportunities and enhancing the effectiveness of its resources for future demands. Specialization of services by sectors will gain importance in future years. To continue to meet the criteria of professional competence and effectiveness, the CTCS network will have to develop and apply specialization of services commensurate with the specialization and sophistication of client needs.

The updating of the directory of resource persons should be in a phase with sectoral demands.

4. The classification of IR, by type of enquiry, reveals that about 47% of the requests are for manufacturing process know-how and machinery and equipment supplier.

There is no similar classification or breakdown of the Technical Assistance problem solving in the field. A similar type of classification for technical assistance problem solving in the field (in terms of Product, Tooling, Process, Machinery and Equipment, Raw Materials, Manpower skills, Training, etc) can form the basis for a comprehensive Data Base for accumulating considerable knowledge of varying technological situations and problems. This Data Base can then

be used in identifying and matching skills of consultant with future assignments. Shop floor problem solving fits easily into the above taxonomic structure. Shop floor personnel are product-process-machine specialized and thus specific matching and selection from a data-base is facilitated.

VII. CONCLUSIONS

A. Overall Effectiveness of the Programme and the Project's Operational Activities

1.0 The Responses of the Clients/Users

1.1 The CTCS Network Project will have effected its highest impact on the micro and small scale enterprises in the OECS countries if the evidence in a sample of twenty-four user/clients reflect the population of users of its Technical Assistance Program to date.

70% of the users who indicated satisfaction with CTCS' Service, were also able to identify one area of enterprise function/operations in which they had received significant improvements/benefits.

12% of the users (medium-scale) were satisfied with the performance of the consultants/resource persons but were not able to benefit from the assignment.

13% (rounded off), were indifferent, neither expressing satisfaction nor dissatisfaction. They did not know of or understood the outcome of the consultancy assignments.

One user, who expressed dissatisfaction with the performance of the consultant on the latest assignments, had a very successful earlier project with the CTCS Network. He, therefore, did not want to register his dissatisfaction. Other cases of dissatisfaction expressed (by the client), did not occur in this sample, but was reported in a frank interview by one of the consultants interviewed in Jamaica.

1.2 Of the associated/attributable benefits, in functional/operating areas, gained by the clients as a consequence of the CTCS assignment, the technological type service was more frequently in demand and the area in which major benefits were obtained by clients. Where a product or service required substantial technical knowledge and/or operating skill for its utilisation, client's staff had to be trained in their own premises, and machinery requiring installation could not be considered satisfactorily installed until they were operated effectively by the client's own workers. Where the manufacturing process was technically more complex, major improvements in operating efficiency and productivity came from transfer of technological know-how than in other areas (marketing, management, etc.)

1.3 Some medium-scale enterprises also benefitted from the consultancy assignments, but they would not have floundered, if the services were unavailable to them.

1.4 The more sensitive measure of effectiveness is that approximately 50% of the micro and small business enterprises could not start off or maintain the right course of development if deprived of these services as the CTCS Network Project offered. Although the mortality rate for small-scale enterprises in the Caribbean is not a startling statistic as in the USA or Japan, the peculiar environmental conditions and the low volume

markets of island economies, provide few entrepreneurial opportunities and if deprived of CTCS service, micro and small scale entrepreneurs can remain in a state of limbo or have regression relative to the large scale enterprise sector.

2.0 The View from within the CTCS Project

2.1 In analyzing the more effective or higher valued/priority outputs of technical assistance from the CTCS Netowrk to its users (i.e. technical assistance transfer from the office and technical 'show-how' in the field) the variance between planned and achieved outputs were as follows (See Table VI.I).

	TYPE OF OUTPUT	MAGNITUDE OF OUTPUT		
		Proposed	Achieved	Variance
1.	Cumulative Technical Enquiries performed from the office 1985-1988.	396	544	+154
2.	Cumulative Technical Assistance performed in the field 1985-1988	300	211	-89

The variance level on a cumulative basis for the first type of output is highly favourable.

The variance level in a cumulative basis for the second type of output appears to be unfavourable. But the 70% achievement on the proposed base is acceptable when one considers that there are more external variables influencing this type of output such as demand, type of problem, and availability of resource persons, etc).

2.2 The issue of proportion between these major outputs and related activities depends upon the specific targets set by the management or higher level decision-making group. The optimization of these outputs depend upon the weights or values attaching to each unit of output and planned allocation of the CTCS' internal manpower. One problem solving technical assistance in the field has greater impact than three documents repackaged for users who may or may not implement the information so obtained. One repackaged document may utilize five (5) man-days as against one man-day for preparing terms of reference of a consultancy assignment. The Resource Persons and staff of the CTCS Network Project place a much higher value on the 'show-how or hands-on' technical assistance services and short training courses than other information packages. The former is regarded as technology in an action or dynamic mode whilst the latter is an ideation mode that may or may not be transformed into actuality.

2.3 The CTCS Project has been able to enlist as resource persons some very competent professional and experienced practitioners and shop floor specialists. The CTCS Project has developed also the capability and skills to match the resource persons to varying technological situations and problems in the OECS countries - for identifying problems, finding relevant information, analysing and synthesizing, choosing between alternatives solutions and developing complementary roles with clients.

B. Cost Effectiveness of the Services

There are seven active demand sectors (in total 10 potential demand sectors), five of which have further sub-divisions, so that the range of required professional expertise and skills can extend over fifteen (15) to twenty (20) areas of technological know-how.

Evaluation under this heading depends on the basis of comparison used in assessing relative worth. The impact or effectiveness of this program may be compared with equivalent programs on the basis of program costs and of results measurable in the same units.

Using a small scale industries technical assistance program of UNIDO as the comparative basis, the cost of one expert man-month in such a program varies between US$8,000 - US$10,000 (consisting of basic salary, per diem for travelling away from duty station, and travel expenses, etc.).

Considering that three assignments (each of average duration 7-8 days) can be performed per month by an expert in his area (sub-sector) of competence. Two hundred assignments can easily consume US$600,000 plus indirect expert costs, when compared to CTCS' two hundred and eleven assignments costing approx. US$300,000 (based on data from Table VI.2).

Thus the CTCS program is more cost-effective than a typical small scale industries technical assistance program of UNIDO. But the significant measure of effectiveness is that the cadre of Caribbean Consultants is being developed to meet the overall objective of the CTCS Network Project, and in the long-run a regional resource capability will be available. This Caribbean Network capacity consists of 35 National

and Regional institutions and 100 experienced Caribbean Specialists have been registered as readily available resource persons.

Table VI .2 REVISED BUDGET

(US$)

Recipient-Administered Funds	Original Budget	Actual Expenses Up to Dec. 30,'87 (Including Accruals)	Balance	Original Estimated Expenditure Jan 1-Oct 31,'88	Revised Estimated Expenditure Jan 1-Oct 31,'88
Salaries and Allowances					
2 Extension Officers	132,830	102,934	29,896	26,110	[illegible]
Support Services					
Data Link Services	3,000		3,000	-	-
Meetings					
CTCS Steering Committee	12,844	6,475	6,369	2,500	[illegible]
Representatives National Institutions	15,000	8,914	6,086	-	[illegible]
Travel					
Extension	49,350	29,147	20,203	9,960	[illegible]
Resources Advisors Visits	116,350	149,210	(32,960)	25,000	[illegible]
Research Expenses					
Honoraria (US$100/day)	57,500	61,165	(3,665)	15,000	-
Publications	62,777	35,578	27,199	2,900	-
TOTAL	449,551	393,423	56,128	81,460	[illegible]

C. Comments on the Fee Structure

Several considerations and proposals on the fee structure have been analysed and documented, but the present fee charged by the CTCS Network Project for a field technical assistance remains at $750 in local currency of the country of the assignment.

The profile of the frequency distribution of field technical assistance by duration of assignment is mainly bi-modal, 5 days and 10 days groupings. The projected disbursements for resource persons for a 5 day assignment or a 10 days are US$1,400 and US$2,800 respectively. The variable cost per assignment consists of the above element of cost for the resource person plus a semi-variable cost element of the extension officers visits. Assuming a 15% degree of variability, the variable cost of an assignment can be US$1,600 (for a 5-day assignment) and US$3,200 (for 10-day assignments). The annual fixed cost at the 1987 level of activity was approximately US$300,000 (inclusive of CDB and IDRC's expenditure).

Management's discretion is a necessary input into the allocation of the fixed costs over the several types of outputs from the CTCS project. Assuming a 50% allocation of annual fixed cost to the field technical assistance output (i.e. US$150,000), then one technical assistance assignment incurs a cost of approximately US$3000 (using a basis of 100 assignments per year). The above analysis illustrates the private sector analysis of cost recovery. However, grants or special funds are intended for development purposes, and the fixed costs should be considered as overheads or social cost of development on a long term basis. The variable cost may then be viewed as a revolving fund to be available for technical assistance to prospective and existing

enterprises.

In principle, then, each client should pay a fee-for-service on variable costs of the assignment. This is expected to range between US$1600-US$3000. Micro and small-scale enterprises should pay the fee in four monthly installments

D. Advice on the Technical Reliability and Appropriateness of CTCS' Services to its Users/Clients

Technical services needed by micro, small scale and medium scale industries can be categorized into five functional classifications: Facility Design and Engineering, Technological Services, Business Economics and Profitability Analyses, Management Services, In-Plant Training Programs (see Section IV.A for details).

The CTCS Network Services have been offering these services in varying mixes and emphases, the very basic show-how, Inplant training of operatives and other Product and Process know-how.

The appropriateness and technical reliability of the CTCS service is reflected in the high degree of successful matching of Resource Consultants in varying problem solving situations, the feasibility of the solutions and general suitability and acceptability by the clients.

But as noted in Section IV "The nature of consulting requires an outlook for future opportunities and enhancing the effectiveness of its resources for future demands.Specialization of services by sectors will gain importance (e.g. Tourism, Agro-Industrial, Aqua-Culture, Tissue Culture, Handi-Craft etc.) in future years.To continue to meet the criteria of professional competence and effectiveness, the CTCS Network will have to develop and apply specialization of services commensurate with the specialized and sophisticated need of their

clients and Users, as they mature and expand".

E. The Use of Data Bases and Information Handling

The information system (or data base) of the CDB, in so far as it relates to accessibility by the CTCS Network project, is used for storage and retrieval of statistical information as can be seen in Appendix III.

However, a more dynamic and inter-active Data-Base can be developed for the following pruposes:

(1) Matching Resource Consultant's expertise and experience with specific elements of problem definition in Technical Assistance Programs and thus improving and refining the selection procedure in the screening and search for the appropriate Consultant.

(2) Storage and updating of financial and other product and production data of clients on a periodic basis (perhaps annually) so that trends in enterprise performance can be monitored and anticipated.

Future measures of effectiveness can be explicitly quantified in terms of significant changes/improvement (10-15%) an or major changes/development.

(3) Information on Industrial Technology (products, processes, machinery, etc.) that can impact on the operations of existing enterprises. Such information might be appropriate technology developed in the R&D institutions in the region or available from external sources that can make enterprises more productive, or cost competitive in export markets.

The information should also include Production Cost Data of

comparable products and Product Standards and Specifications and relevant market information where the region has preferential treatment or quotas under favourable trade agreements - CBI II, Carib-Can, Lome III, etc.

VIII. RECOMMENDATIONS FOR CONSIDERATION IN A NEW WORK PROGRAMME

The statements of overall and specific objectives of the CTCS Network project have been confirmed as still being valid over a time horizon of three to four years, 1989 - 1992.

The overall objective is to increase the capacity of Caribbean countries to meet their technological requirements for efficient operation of existing industries and the development of new productive enterprises which create employment, earn foreign exchange or contribute to increasing growth in the region.

The following planning premises and measures conducive to attainment of the overall objectives are recommended for consideration in developing detailed work plan and implementation programme.

1.0 Existing Industries - a proactive role for the CTCS Network Project.

1.1 Perform a more comprehensive survey of existing industries in the OECS countries and other countries of the network that are expected to be served by the CTCS project.

1.2 Develop a database of marketing, technological, financial and operating data and other relevant characteristics.

The priorities and demand for technical assistance (type and form to be extended to a particular country) can then be projected depending on expressed needs and stage of development of the respective country. Information from national plans (as developed by the Industrial Development Authorities and Development Banks will indicate which sectors of Industry are given priority by government and which operations within these industries are considered as feasible,

suitable and acceptable for the attainment of the country's objectives). The rate of industrial growth, the extent of industrialization and the order in which the various industries are established are key information for work planning by the CTCS unit.

1.3 Future indicators and measures of effectiveness can be explicitly quantified in terms of significant changes/improvement and/or major changes/development.

2.0 APPROPRIATE TECHNOLOGY FOR DEVELOPMENT OF NEW PRODUCTIVE ENTERPRISES

The liaison and communciation between the CTCS project and Development Banks should be improved in respect of pre-investment and feasibility studies. Technological information and inputs should begin to flow into the development of new productive enterprises so that implementation and follow-up of projects can be facilitated (e.g. In-plant training can be anticipated, Resource Consultant for start-up of operations can be identified and informed, other operations problems can be avoided).

Harmonization of technology policies, reduction in variety of equipment and group in-plant training and workshops are also facilitated. Several industries - garment, printing, small hotels/guest houses for the tourism trade are cases in point.

3.0 WORKSHOPS/SEMINARS/GROUP TRAINING IN SUPPORT OF FIELD TECHNICAL ASSISTANCE ACTIVITIES

1. Workshop on the basic mutually supportive modes of consulting-resource consultants/process consultants.

The very practical shop-floor resource persons are sometimes too narrowly specialized in a particular

process or make of equipment and do not appreciate the inter-functional relationship with other areas of operations.

Some of the other Resource Consultants have to appreciate the client-consultant relationship and to help clients develop a certain degree of self-reliance to solve some of their own problems.

Process Consultants are concerned with passing on their approaches, methods and values so that the enterprises themselves can diagnose and remedy most of its own operational problems.

2. Workshop for Clients on the use of Technological Information provided by the CTCS Network

The CTCS project disseminates some documentation and repackaged information on existing technology. Such information packages may also be extended to include product standards/specification, relevant technological innovations and know-how developed in the region's industrial research and development institutions, adaptions of technology on low volume applications, etc.

A seminar/workshop in the above area promotes inter-regional transfer of knowledge and techniques and induces/orients clients.

4.0 PROGRAMMING OF OUTPUTS AND MANPOWER ALLOCATION TO OPTIMIZE OBJECTIVES

It is suggested that a goal programming approach, based on quarterly reviews, be implemented, in which the weightings of values between major outputs are articulated, together with planned manpower

allocations to the respective activities. This approach ensures congruence of target measures and control of achievement of objectives.

5.0 DATA ON RESOURCE PERSONS

Expertise, experience and field solutions of consultants should be matched, at the enterprise level, to the product, process, machinery, raw materials, etc., and be part of the available Data Base. Thus all data on resources, operations and product/service of an enterprise should be related to the expertise required.

The Resource Persons register should be continuously updated to include future growth sectors.

6.0 Additional Future Role of External Planning Assistance to Small and Medium Scale Enterprises

The CTCS entity should consider playing the role of "External Planning Assistant" in modes or stages as analyst or catalyst. Owner/managers of these firms are caught up in the daily grind of operational activities and are primarily concerned with the efficient internal workings of the businesses. Because of financial and liquidity cries, operational efficiency often becomes the continuing concern for the businesses to stay solvent.

However, these enterprises also need to project their businesses beyond the customary annual horizon.

Depending on the degree of maturity of the enterprise and sophistication of the owner/managers, both roles (analyst and catalyst) may be played, but with varying emphasis.

In the analyst role, the CTCS entity (through its resource consultants or extension officers) performs much of the detailed analytical work in consultation with the owners and other technical subordinates in the enterprise, but with management in these enterprises having the overall responsibility for the planning effort and selecting from the alternative courses of action proposed.

In the catalyst role, a stimulating role, workshops may be held in various territories or by industry grouping to encourage them to assume a strategic orientation and to train them in the practice of the planning process.

7.0 THE IDENTITY OF THE CTCS ENTITY WITHIN THE PERMANENT STRUCTURE OF THE CDB

The CTCS entity is housed within the Technical Cooperation Unit of the Projects department.

Primary activities of the TCU are linked at the Institutional level and with longer-term TA programmes vis-a-vis the CTCS's project which operates practically at the micro-economic level of the enterprise in the field.

The question of permanence of the CTCS entity within the permanent structure of the CDB arises out of the implications of its identity and posture either as a 'strategic arm' or as a 'tactical project unit'.

The CTCS entity has been performing a role emphasizing the tactical project approach which is dedicated to improvement in operational efficiency and assisting its clients in 'crisis' problem solving.

A strategic posture for the CTCS entity implies that the micro, small and medium scale enterprises are assured of continuous planning and operational assistance through various stages of development and maturity of the enterprises. This latter mode requires that the CTCS entity itself be incorporated into the permanent structure of the CDB.

The work programme may be conducted as a project with a definable beginning and definable end or as one of several continuing

phases of the activities of the CDB.

L I S T O F A P P E N D I C E S

A P P E N D I X I

LISTS AND PROGRAM OF VISITS, DISCUSSIONS AND INTERVIEWS

MEETING WITH MANAGEMENT OF CTCS/CDB STAFF - BARBADOS

CTCS UNIT & CDB'S PROJECTS DEPARTMENT

CTCS UNIT AND CDB'S PROJECTS DEPARTMENT

1. Ms. Y. Hall - CTCS Co-ordinator
2. Mr. A. Eustace - Director, Projects Department
3. Dr. J. Dellimore - Chief Project Officer, Technical Co-operation.
4. K. Harvey - CTCS Network Consultant.
5. Mr. W. Voelt - CTCS Network Consultant.

PERUSAL OF REPORTS

a. CTCS Network Annual Reports 1985, 1986, 1987.

b. Computer Printouts - Data Technical assistance requiring field visits - 1988.

c. Proposal for a permanent CTCS Network Project - Technology and Energy Unit - September 1983.

d. Sample Reports of CTCS Resource Consultants on Assignment.

e. Publications of CTCS Unit.

f. Minutes of Meetings of CTCS Steering Committee.

INTERVIEW WITH RESOURCE CONSULTANTS OF CTCS

IN JAMAICA - FEBRUARY 12th - 17th, 1989

1. Ms. M. Davies - Network Node Co-ordinator, Jamaica Bureau of Standards,

   Standards Officer, Expertise - Food Technology.

   Field Assignments - ST. LUCIA, GRENADA.

2. Mr. L. Davis - Jamaica Bureau of Standards,

   Expertise - Furniture and Wood Working (Product Design and Production Engineering) . Field Assignments - ANTIGUA, BELIZE.

3. Ms. V. Bullock -

   Expertise - Food Technologist (Bakery - Patisserie & Jamaican Patties).

   Assignments - ST. KITTS.

4. Ms. S. Scott -

   Expertise - Food and Beverage for Hospitality Industry

   Assignments - GRENADA

5. Ms. M. Pollard - Food Technologist

   Expertise - Meat Processing.

6. Dr. P. Hamilton

   Expertise - Appropriate Technology

   Assignment - Grenada Coconot Product Derivatives.

7. Patrick Wright - Jamaica's Economic Development Agency

   Programme Director - Footwear, Luggage, Allied Products.

8. Ozzie Sutherland

   Expertise - Garment Manufacturing

   Assignment - St. Kitts, Nevis, Dominica, St. Lucia, Grenada.

...2

9. Orett Thomas

   Expertise - Animal & Poultry Production

   Assignment - NEVIS, ANGUILLA.

10. Keble Munn

   Expertise - Coffee Processing

   Assignment - DOMINICA.

11. Mrs N. Rhoden

   Expertise - oenology and viti culture

12. Mr. R. Peynado

   Field - Civil Engineering

   Assignment - BELIZE (Concrete Block Making)

13. Patrick Duncan

   Field - Mechanical Engineering (Maintenance)

   Assignment - MONSERRAT.

CLIENTS & CTCS NETWORK REFERRAL CENTRES - ST. KITTS

FEBRUARY 18th - 23rd, 1989

1. Mr. A. Hector - General Manager, Development Bank of St. Kitts, and Nevis.

   Mr. A. Mills - Senior Projects Officer

   Mr. P. Peets - Project Officer.

2. Gordon Manufacturing Limited (Automobile Services)

   - Automobile Mufflers/Alignment/Balancing.

3. Coiltronics Limited

   - Manufacture of Electronic Components (Transformers for Micro-Computers).

4. Island Bakeries -

5. Palms Patisserie -

6. Sun Island Clothes - Garment Manufacture

7. Leewards Shrimp Industry - Aqua Culture (Shrimp Production).

8. St. Kitts Masonry Products - Concrete Blocks.

9. Government Quarry and Stone Crushing Operations.

10. Franklands Agro Industry.

CLIENTS & CTCS NETWORK REFERRAL CENTRES - DOMINICA

FEBRUARY 23rd - 26th, 1989

1. L. Leslie, Manager - Consultant - Agriculture & Industrial Development Bank.
2. Mr. A. Charles - Senior Industry Officer.
3. Mr. J. Griffith - Industrial Development Specialist.
4. Mr. P. Delauney - Senior Agriculture Officer.
5. J. Astaphan & Co. Ltd. - Flexible Polyurethane Foam Products (Mattresses/Cushions).
6. Moreau's Garment Manufacturing -
7. Bentashoe Plastic Co. Ltd., - Plastic Footwear.
8. Paul Joseph & Co. - Food Products (Pasta, Noodles, etc)
   - HDPE Film
   - Flexographic Printing.
9. Bellot & Co. Ltd., - Coffee Processing & Packaging.
10. Dominica Coconut Products Ltd., - Plastic BLow Moulded Rigid Containers for Coconut Oil.
11. National Development Foundation.
12. Caribbean Commodity Exchange Ltd.,

CLIENTS AND CTCS NETWORK REFERRAL CENTRE - ANTIGUA
MARCH 19 - 21, 1989.

1. Mr. Hilroy Willet, Manager - Antigua and Barbuda Development Bank.

2. Dr. Carl Walter - National Development Foundation.

3. Mr. G. Hadeed - Plastic Foam and Furniture Company Limited.

4. Mr. Harold Dickensen - Bakery and Pastry Products.

5. Goldie's Bakery

6. Antigua Printing and Publishing Company. - Mr. Roland Walker - General Manager.

7. Leeward Paints Limited - Mr. Ron Davies - General Manager.

8. Benair Health Club (Premises destroyed in fire).

CLIENTS AND CTCS NETWORK REFERRAL CENTRE - GRENADA
MARCH 22 - 24, 1989

1. Mr. Trevor Graham - Senior Industry Credit Officer - Grenada Development Bank.
2. Mr. Norbert Arnold - Minor Spice Cooperative Society Ltd.
3. Mr. Terry Moore - Grenada Sugar Cane Factory.
4. Mr. Deodatt Singh - Dura Chem Manufacturing Limited.
5. Ms. Beverly Cartes - Spice Island Retreaders Limited
6. Mr. Jeoffrey Thompson - Director, Grenada Development Bank.
7. Mr. L. Ross - Grenada Cassava Factory.
8. Mr. Ronald Charles - General Manager - Grenada Development Bank.
9. Dr. E.R. Buckmire - Consultant (and former Extension Officer of CTCS Network Project).
10. Mr. Daryl Braithwaite - Hi Tech Printery.

A P P E N D I X I I

QUESTIONNAIRE FOR FIELD INTERVIEWS

AND

BASIS FOR ITS DESIGN DEVELOPMENT

PROCEDURE FOR FORMULATING AN ASSESSMENT STRUCTURE AND ASSESSING THE EFFECTIVENESS OF THE CTCS NETWORK AND DESIGNING AN APPROPRIATE QUESTIONNAIRE

Evaluation, in the broadest sense, is a process of measurement designed to estimate worth. As viewed in the context of the Terms of Reference and Overall and Specific Objectives of the CTCS project, the evaluation of the programme and project outputs, activities and resources available, is a process of assessment designed to provide information about its operations and effectiveness, in order to assist in making decisions about the future.

A general and flexible procedure seems necessary both to capture the essence of the objectives held by the higher-level decision-making authorities (of the IDRC - CDB) and to interpret them in terms of quantitative and qualitative units of worth (It is presumed that the agencies also use considerations that preclude dollar profit as a universal measurement criterion).

1. List and amplify the several different objectives that are to be satisfied.

2. For each listed objective, derive a set of specific worth criteria in terms of which the CTCS's network project may be assessed. It is of course necessary to generate a hierachical criterion structure. Each objective will have to be sub-divided into one or more lower-level criteria. The prupose of sub-dividing is to state explicity - that is, in terms of the lower-level criteria - what is intended by or included within the meaning of the corresponding objective. The process of repeated sub-division continues until the evaluator feels that adequate clarification has been achieved.

3. Physical performance measures based on the output and activities of what is actually delivered is associated with the respective objective and worth connections must be established between them.

Two Functions need to be developed.

i. a weighting function recognizing both the existence of multiple objectives and the differential relative importance of satisfying them.

ii. a scoring function to assign a worth score to a quantum of performance which measures and should reflect the extent to which that amount of performance actually satisfies the criterion associated with the objectives.

Three basic relationships can satisfy questions of worth between different objects or activities

1. Same-difference relationships - that is, whether two objects or activities are assessed as possessing the same or different worths.

2. Greater than, less than relationships - that is, whether one object or activity is assessed as possibly more or less worth than another.

3. Comparative magnitude relationship - that is, how many times as much worth one object or activity is assessed as possessing compared to another.

   Worth numbers may be viewed as ratios between actually achieved satisfaction and maximum possible satisfaction.

Objectives are very general statements of desirable attributes that higher-level authorities would like to see achieved and satisfied by the output (in this case, delivered by the CTCS Unit). Any assessment procedure must induce higher level decision makers to clarify the meaning of the overall and specific objectives by articulating a top down hierachical structure of successively more specific performance criteria. Each set of lower-level criteria elaborates or defines more precisely what is intended by its predecessor higher-level criterion. The result is a multi-level top down branching structure from a few overall objectives at the top to numerous detailed criteria at the base. The criterion structure must eventually be related to concrete alternatives.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: M.O. "PAT" HAMILTON Ph.D

FIELD OF PRACTICE: FOOD SCIENCE AND ENGINEERING/APPLIED TECHNOLOGY.

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☑ ABOVE AVERAGE ☐ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☑ 5 - 9 YRS ☐ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☑	☐	☐
MANAGEMENT	☑	☐	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN a/ GRENADA - COCONUT OIL EXTRACTION; 6/6/88

b) MINOR SPICE COOPERATIVE SOCIETY LTD. 8/20/87

2. DEGREE OF SUCCESS OF ASSIGNMENT.

b) 8/20/87 a) 6/6/88

VERY SUCCESSFUL ☐ SATISFACTORY ☑ PARTIAL ☑

a/ PROJECT IN ABEYANCE, DUE TO CHANGE IN PROJECT OFFICER AT GRENADA NATIONAL BANK.

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

DEPENDS ON SUCCESS OF FIRST ASSIGNMENT. NEW INVESTMENT OPPORTUNITIES ARE RISKY AND INDUCEMENTS ARE NEEDED.

4. DURATION OF ASSIGNMENT

a) 6/12/83 b) 8/24/83

SHORT ☑ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

a) PROJECT REQUIRES APPROPRIATE TECHNOLOGY IN FABRICATION OF COCONUT MILL, FIBRE SEPARATING EQUIPMENT, ETC

5. IS CONSULTANCY FEE SATISFACTORY?

YES ☐ NO ☑.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION/TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: FRANK GORDON/GORDON ENTERPRISES - ST. KITTS

2. OWNERSHIP AND MANAGEMENT: SOLE OWNERSHIP/MANAGER

3. SIZE: MICRO ENTERPRISE

INVESTMENT: EC $100,000 APPROX. IN EQUIPMENT.

EMPLOYEES: < 10 (6 COUNTED ON DAY OF VISIT)

SALES: < EC $250,000/YR

4. MARKET: DOMESTIC ☑ CARICOM ☐ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE: WHEEL ALIGNING/WHEEL BALANCING SERVICE
REPAIRS TO MUFFLER SYSTEMS (MINOR)

CONSUMER ☑ INDUSTRIAL ☐

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☑

MEDIUM TO LARGE BATCHES ☐

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☐	☑
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☐	☑
SEMI-SKILLED/MANUAL	☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ...1.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: ....0.....

NO. OF WORKERS IN PRODUCTION: ...5 OPERATIVES PLUS 1 OFFICE ASSISTAN

9. FINANCE: PRIVATE AND INSTITUTIONAL: PRIVATE AND DEVELOPMENT BANK.....

.....

10. SERVICES PERFORMED BY CTCS: (1) Feasibility Study on Manufacturing of Mufflers. 5/1/85 MIC, TIAD

(2) Start-up of Wheel Alignment/Wheel Balancing Services Training of Operatives. 5/12/87 T. WALKER R'DAS

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☑ SATISFIED ☐ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☑ ACCEPTABLE ☐ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☑

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower		✓
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.	✓	
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

A P P E N D I X I I I

CUMULATIVE DATA, 1985 - 1988

INFORMATION REQUESTS AND TECHNICAL ASSISTANCE

C A R I B B E A N D E V E L O P M E N T B A N K

C T C S N E T W O R K

SUMMARY TABLE OF IR/TA BY SECTOR

January 1, 1985 TO December 31, 1988

	IR	TA
Industrial/chemicals/petro chemicals	64	45
Agro_industry/food processing	169	74
Capital goods/fabricated metals	48	18
Textile/leather goods	16	23
Paper and Paper Products	16	5
Wood and Wood Processing	34	7
NRSE, Energy	177	20
Financing	-	7
Tourism	-	11
Social Services	-	1
TOTAL	544	211

C A R I B B E A N D E V E L O P M E N T B A N K

C T C S N E T W O R K

CLASSIFICATION OF INFORMATION REQUESTS

January 1, 1985 TO December 31, 1988

	NO.	%
USERS		
Government Decision makers	79	14.5
Small-Medium scale Industries	181	33.2
Research Institutes	23	4.2
Development Banks	70	12.8
Consulting Companies	24	4.4
Other-Libraries,School,Com.Banks,Pvt.Ind	97	17.8
Extra Regional	70	12.8
TOTAL	544	

C T C S N E T W O R K

CLASSIFICATION OF INFORMATION REQUESTS

January 1, 1985 TO December 31, 1988

	NO.	%
SECTOR		
Industrial/chemicals/petro chemicals	64	11.7
Agro_industry/food processing	189	34.7
Capital goods/fabricated metals	48	8.8
Textile/leather goods	16	2.9
Paper and Paper Products	16	2.9
Wood and Wood Processing	34	6.2
NRSE, Energy	177	32.5
Financing	-	-
Tourism	-	-
Social Services	-	-
TOTAL	544	

C T C S N E T W O R K

CLASSIFICATION OF INFORMATION REQUESTS

January 1, 1985 TO December 31, 1988

	NO.	%
TYPE OF ENQUIRY		
Manufacturing Process Know_how	117	21.5
Machinery and equipment supplier	140	25.7
Reasearch Activities	57	10.4
Raw Materials	23	4.2
Quality Control	-	-
Patent	-	-
Other-Document,Publications	206	37.8
Marketing	1	0.1
Machine Repair/Maintenance	-	-
Management	-	-
Systems Development	-	-
Training	-	-
TOTAL	544	

C A R I B B E A N D E V E L O P M E N T B A N K

C T C S N E T W O R K
SUMMARY OF REQUESTS BY COUNTRY

January 1, 1985 TO December 31, 1988

COUNTRY	IR	TA
ANGUILLA	19	6
ANTIGUA AND BARBUDA	19	14
COMMONWEALTH OF THE BAHAMAS	4	1
BARBADOS	62	7
BRITISH VIRGIN ISLANDS	3	-
BELIZE	37	25
COMMONWEALTH OF DOMINICA	45	24
GRENADA	55	47
GUYANA	17	3
HAITI	2	-
JAMAICA	27	3
MONTSERRAT	13	13
PUERTO RICO	2	-
ST. KITTS & NEVIS	34	24
ST. LUCIA	31	27
ST. VINCENT AND THE GRENADINES	55	16
TURKS & CAICOS ISLANDS	2	-
TRINIDAD & TOBAGO	31	1
EXTRA REGIONAL	86	-
	544	211

CARIBBEAN DEVELOPMENT BANK

CTCS NETWORK

ANALYSIS OF INFORMATION REQUESTS

January 1, 1985 TO December 31, 1988

COUNTRY	DOCUMENT	REPACKAGING	REPACKAGING DOCUMENT	TECHNICAL EXPERTISE
ANGUILLA	2	14	-	3
ANTIGUA AND BARBUDA	8	6	-	5
COMMONWEALTH OF THE BAHAMAS	2	1	-	1
BARBADOS	24	16	1	21
BRITISH VIRGIN ISLANDS	2	-	-	1
BELIZE	10	21	-	6
COMMONWEALTH OF DOMINICA	10	21	3	11
GRENADA	10	31	1	13
GUYANA	8	4	-	5
HAITI	2	-	-	-
JAMAICA	24	2	-	1
MONTSERRAT	3	9	-	1
PUERTO RICO	1	1	-	-
ST. KITTS & NEVIS	7	13	-	14
ST. LUCIA	9	14	-	8
ST. VINCENT AND THE GRENADINES	9	27	-	19
TURKS & CAICOS ISLANDS	1	1	-	-
TRINIDAD & TOBAGO	24	3	1	3
EXTRA REGIONAL	74	12	-	-
	230	196	6	112

APPENDIX IV

i) DESCRIPTION OF STAFF OF CTCS ENTITY

ii) WORK AND INFORMATION FLOW IN CTCS NETWORK PROJECT

iii) CARIBBEAN COUNTRIES AND INSTITUTIONS INVOLVED IN TECHNOLOGY TRANSFER

DESCRIPTION OF STAFF

Coordinator - Analysis of requests, quality control, management of systems, liaise with Projects Department and DFCs.

Project Officer, Documentation - Recording requests, supplying documents, maintaining database.

Two Extension Officers - Identification, definition, analysis of needs, advise requesters, follow-up use of information and Technical Assistance, evaluate impact and promote services.

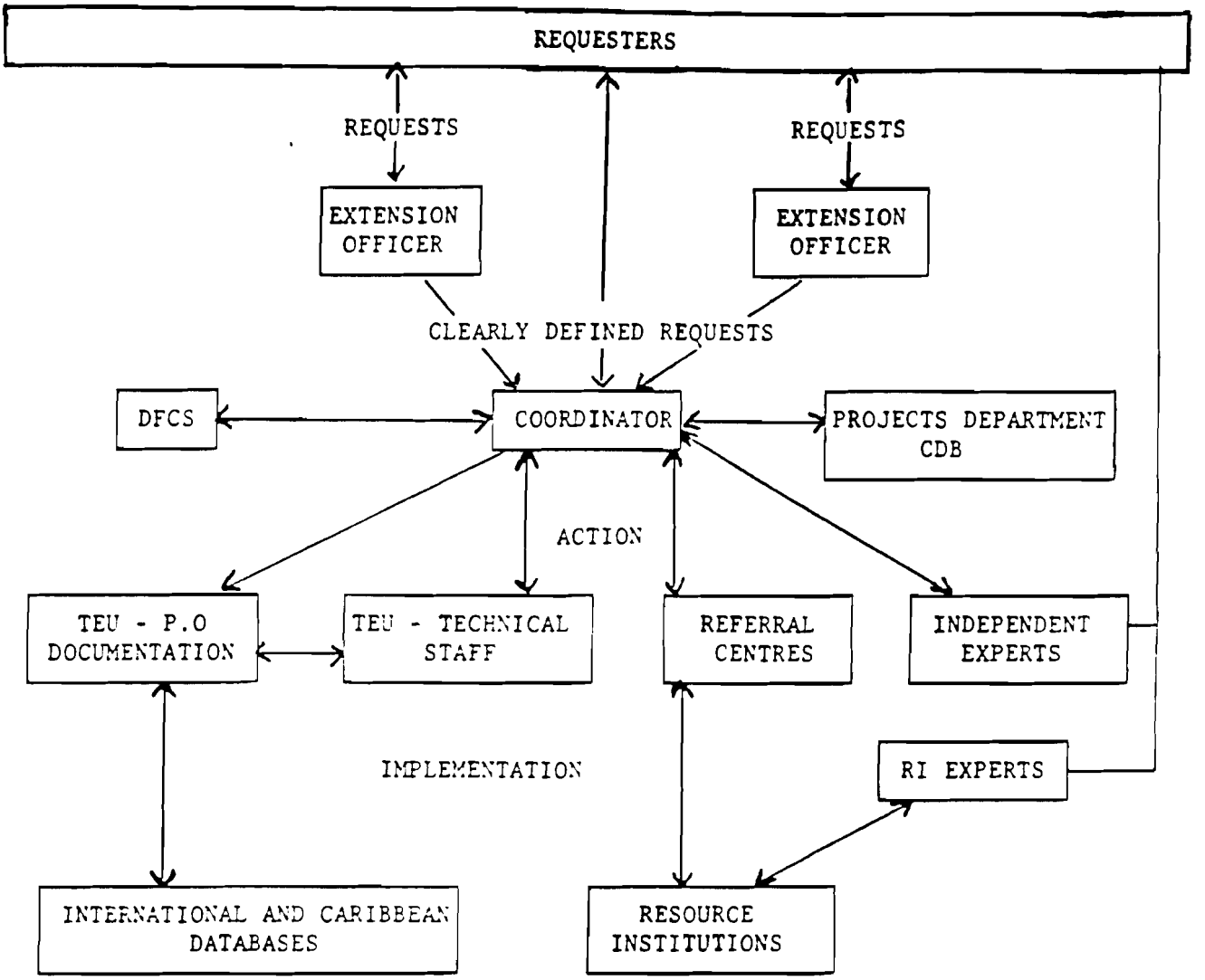
TEU Technical Staff - Half day/week written advice, repackaging information, Technical Assistance in some cases.

Note

(i) ONLY Coordinator, Extension Officer and Technical Experts will relate directly with users; and

(ii) all out-going responses to be reviewed by Coordinator for quality and precision.

SCHEME OF AN INTEGRATED TECHNICAL INFORMATION AND ASSISTANCE SERVICE



CARIBBEAN COUNTRIES AND INSTITUTIONS INVOLVED IN TECHNOLOGY TRANSFER

ANGUILLA	To be identified
ANTIGUA AND BARBUDA	Antigua and Barbuda Development Bank Antigua and Barbuda Produce Chemist Laboratory Antigua and Barbuda Public Library
BAHAMAS	Bahamas Development Bank
BARBADOS	Barbados Development Bank Barbados Government Laboratory Barbados Institute of Management and Productivity University of the West Indies (Cave Hill Campus)
BELIZE	Belize Energy Unit Development Finance Corporation
BRITISH VIRGIN ISLANDS	British Virgin Islands Public Library
CAYMAN ISLANDS	To be identified
DOMINICA	Dominica Agricultural and Industrial Development Bank Dominica Produce Chemist Laboratory Dominica Public Library
GRENADA	Grenada Development Bank Grenada Produce Chemist Laboratory Grenada Public Library
GUYANA	Guyana Institute of Applied Science and Technology
JAMAICA	Jamaica Development Bank Jamaica Industrial Development Corporation Jamaica Scientific Research Council
MONTSERRAT	Economic Development Unit Montserrat Produce Chemist Laboratory Montserrat Public Library
NETHERLAND ANTILLES	To be identified
ST. KITTS AND NEVIS	St. Kitts and Nevis Development Bank St. Kitts and Nevis Public Library
ST. LUCIA	St. Lucia Development Bank St. Lucia Public Library

ST. VINCENT AND GRENADINES	Agro-labs Development Corporation of St. Vincent St. Vincent Public Library
SURINAME	Suriname National Planning Unit
TRINIDAD AND TOBAGO	Caribbean Industrial Research Institute
TURKS AND CAICOS ISLANDS	Development Board of Turks and Caicos Islands

i) Data collected on Resource Persons of Work for CTCS

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: MR. L.A. DAVIS - JAMAICA BUREAU OF STANDARDS

FIELD OF PRACTICE: FURNITURE/WOODWORKING

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☐ ABOVE AVERAGE ☑ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☑ 5 - 9 YRS ☐ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☐	☐
MANAGEMENT	☐	☑	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN BELIZE 12/9/87, EXPANSION OF FIRM TO M'FG OF FURNITURE

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☐ SATISFACTORY ☑ PARTIAL ☐

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☑ 50% ☐ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

LESS THAN 50% FOR NEW MICRO-ENTERPRISE.....

50% -100% FOR MATURE ENTERPRISES.....

.....

4. DURATION OF ASSIGNMENT

SHORT ☐ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

.....

.....

.....

5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION/TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: ...MS.MELROSE.DAVIES/CTCS.CONSULTANT/JBS.....

FIELD OF PRACTICE: ...FOOD.PROCESSING/TECHNOLOGY/STANDARDS.....

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☑ ABOVE AVERAGE ☐ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☐ 5 - 9 YRS ☑ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☐	☐
MANAGEMENT	☐	☐	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☐

B. 1. PERFORMED CTCS ASSIGNMENTS IN ST. LUCIA - FOOD FORMULATIONS 5/88

GRENADA - IDC/85

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☐ SATISFACTORY ☑ PARTIAL ☐

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☑ 50% ☐ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

MICRO-ENTERPRISE CLIENTS UNABLE TO PAY FULL COST

.....

.....

.....

4. DURATION OF ASSIGNMENT

SHORT ☐ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

.....

.....

.....

5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION/TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: PATRICK DUNCAN

FIELD OF PRACTICE: MECHANICAL & MAINTENANCE - GARMENT INDUSTRY

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☐ ABOVE AVERAGE ☐ ADEQUATE ☑ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☐ 5 - 9 YRS ☑ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☐	☑	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☑	☐
MANAGEMENT	☐	☑	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN MONTSERRAT - TRAINING OF MAINTENANCE MECHANICS

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☐ SATISFACTORY ☑ PARTIAL ☐

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

.....

.....

.....

4. DURATION OF ASSIGNMENT

SHORT ☐ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

.....

.....

.....

5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION /TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: KEBLE MUNN

FIELD OF PRACTICE: COFFEE GROWING/PROCESSING

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☑ ABOVE AVERAGE ☐ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☑ 5 - 9 YRS ☐ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☑	☐
MANAGEMENT	☐	☑	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN DOMINICA

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☐ SATISFACTORY ☐ PARTIAL ☑

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

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4. DURATION OF ASSIGNMENT

SHORT ☐ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

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5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION/TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: RORY A. PEYNADO

FIELD OF PRACTICE: STRUCTURAL ANALYSIS/BUILDINGS AND ASSOCIATED MATERIALS

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☐ ABOVE AVERAGE ☑ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☐ 5 - 9 YRS ☑ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☑	☐
MANAGEMENT	☐	☑	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN BELIZE - CONCRETE BLOCK QUALITY AND TESTING

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☐ SATISFACTORY ☑ PARTIAL ☐

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

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4. DURATION OF ASSIGNMENT

SHORT ☐ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

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5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION /TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: MS SANDRA A. SCOTT

FIELD OF PRACTICE: FOOD PRODUCTS - CATERING/CONSULTING FOOD AND BEVERAGES

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☐ ABOVE AVERAGE ☐ ADEQUATE ☑ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☐ 5 - 9 YRS ☑ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☑	☐
MANAGEMENT	☐	☑	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN GRENADA - MICRO ENTERPRISES

a). HOTEL KITCHEN OPERATION; b). DEVELOP MENUS USING LOCAL PRODUCT

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL a ☑ SATISFACTORY ☐ PARTIAL b) ☑

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

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4. DURATION OF ASSIGNMENT

SHORT ☐ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

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5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION/TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: ...OZZIE SUTHERLAND.....

FIELD OF PRACTICE: GARMENT PRODUCTION/PATTERN DESIGN

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☐ ABOVE AVERAGE ☑ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☑ 5 - 9 YRS ☐ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☑	☐	☐
MANAGEMENT	☑	☐	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN ST. KITTS, (2) NEVIS (3) DOMINICA (4) ST. LUCIA (5) GRENADA

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☑ SATISFACTORY ☑ PARTIAL ☐

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

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4. DURATION OF ASSIGNMENT

SHORT ☑ SATISFACTORY ☐ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

EDUCATIONAL LEVEL OF TRAINEE RECRUITS TOO LOW

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5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION /TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: ORETT THOMAS .....

FIELD OF PRACTICE: ANIMAL & POULTRY PRODUCTION .....

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☐ ABOVE AVERAGE ☑ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☑ 5 - 9 YRS ☐ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☑	☐
MANAGEMENT	☐	☑	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN NEVIS, ANGUILLA .....

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2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☐ SATISFACTORY ☑ PARTIAL ☐

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

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4. DURATION OF ASSIGNMENT

SHORT ☑ SATISFACTORY ☐ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

NEEDS TO GO THROUGH PRODUCTION CYCLE OF POULTRY

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5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION /TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

DATA COLLECTED ON RESOURCE PERSONS WHO HAVE WORKED FOR CTCS - FEBRUARY, 1989.

A. 1. NAME: MS VETA BULLOCK

FIELD OF PRACTICE: FOOD TECHNOLOGIST (PATTIES)

2. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH ☐ ABOVE AVERAGE ☑ ADEQUATE ☐ BELOW AVERAGE ☐

3. PREVIOUS EXPERIENCE IN SOLUTION OF SIMILIAR PROBLEMS.

10 YRS ☐ 5 - 9 YRS ☑ 3 - 5 YRS ☐ LIMITED ☐

4. STRENGTH/WEAKNESSES OF RESOURCE PERSONS BY POSSESSION OF MULTI-DISCIPLINARY SKILLS.

	HIGH	MEDIUM	LOW
TECHNOLOGICAL	☑	☐	☐
ECONOMIC/ACCOUNTING/COSTING	☐	☑	☐
MANAGEMENT	☐	☑	☐

5. CAPABILITY TO ASSUME BASIC ROLES

RESOURCE CONSULTANT ☑ PROCESS CONSULTANT ☑

B. 1. PERFORMED CTCS ASSIGNMENTS IN ST. KITTS

2. DEGREE OF SUCCESS OF ASSIGNMENT.

VERY SUCCESSFUL ☐ SATISFACTORY ☑ PARTIAL ☐

3.

3.1. WHAT SHARE OF COST SHOULD A CLIENT PAY FOR ASSIGNMENT.

LESS THAN 50% ☐ 50% ☑ 100% ☐

3.2 IF LESS THAN 50%, EXPLAIN WHY?

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4. DURATION OF ASSIGNMENT

SHORT ☐ SATISFACTORY ☑ LONG ☐

IF NOT SATISFACTORY, EXPLAIN REASON(S) WHY?

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5. IS CONSULTANCY FEE SATISFACTORY?

YES ☑ NO ☐.

EXPLANATIONS OF CLASSIFICATIONS

1. FORMAL EDUCATION/TECHNICAL TRAINING

HIGH - PhD/MASTER'S/TECHNICAL OR SCIENTIFIC TRAINING IN SPECIALIZED FIELD (e.g. EIGHT (8) YEARS PLUS IN PRODUCT/PROCESS DEVELOPMENT BEYOND BSc LEVEL); PLUS THREE (3) YEARS TRAINING.

ABOVE AVERAGE - BSc/B.A. PLUS FIVE (5) YEARS TRAINING.

ADEQUATE - HIGHER NATIONAL CERTIFICATE FROM COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY/TECHNICAL INSTITUTE, PLUS 5 - 8 YEARS TRAINING.

BELOW AVERAGE - CRAFTSMAN CERTIFICATE IN TECH-VOC EDUCATION PLUS 5 YEARS TRAINING AND 3 YEARS JOURNEYMAN EXPERIENCE: OR

10 YEARS OF TECHNICAL SKILL ACQUIRED ON THE JOB TRAINING/ PRACTICE.

2. TYPE OF SPECIALIZED SKILLS

TECHNOLOGICAL - PRODUCT/PROCESS/PLANT AND EQUIPMENT. INFORMATION/QUALITY CONTROL/STANDARDIZATION/TRAINING.

ECONOMIC/ACCOUNTING/COSTING - TECHNO-ECONOMIC FEASIBILITY STUDIES/ PRODUCTIVITY STUDIES/ACCOUNTING SYSTEMS (BASIC).

MANAGEMENT - MARKETING/PRODUCTION/ACCOUNTING/FINANCIAL CONTROL.

ii) Data collected in interviews/visits with Users of CTCS' Services

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: COILTRONICS LTD - ST. KITTS - L. MARTIN - GENERAL MANAGER.

2. OWNERSHIP AND MANAGEMENT: FOREIGN/ - LOCAL REGISTRATION

GENERAL MANAGER - FOREIGN.

3. SIZE: MEDIUM SCALE ENTERPRISE.

INVESTMENT: EQUIPMENT EC $500,000

EMPLOYEES: 50-100 (VARIES WITH SUB-CONTRACT)

SALES: NOT STATED

4. MARKET: DOMESTIC ☐ CARICOM ☐ EXTRA-REGIONAL ☑

5. PRODUCT/SERVICE:
COMPONENTS OF MICRO-COMPUTERS TRANSFORMERS/COILS.

CONSUMER ☐ INDUSTRIAL ☑

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐

MEDIUM TO LARGE BATCHES ☑ FOR EXPORT.

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☐	☑
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☐	☐
SEMI-SKILLED/MANUAL	☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: 2

NO. OF SCIENTIFIC AND TECHNICAL STAFF: 0

NO. OF WORKERS IN PRODUCTION: 50 - 100

9. FINANCE: PRIVATE AND INSTITUTIONAL: .....

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10. SERVICES PERFORMED BY CTCS:

To establish on-line QC for assembly of electronic components for microcomputer. Consultant performed quality control duties for Inter. (B'DOS).

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☑ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☑ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

In-house quality inspection but principals (buyers) also perform acceptance quality levels testing. Client is using quality control system of principals.

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

Client has capacity to bear full cost.

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☑

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	✓	
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: SUN ISLAND CLOTHES LTD - ST. KITTS - SAM NARIANI, GENERAL MANAGER

2. OWNERSHIP AND MANAGEMENT: MAJOR SHAREHOLDER/LOCAL MANAGEMENT

3. SIZE: MEDIUM SCALE ENTERPRISE

INVESTMENT: US$100,000 (IN INDUSTRIAL SEWING MACHINES AND EQUIPMENT)

EMPLOYEES: MIN. 75 - MAX 160

SALES: NOT STATED (BUT COULD EXCEED EC$2 million).

4. MARKET: DOMESTIC ☑ CARICOM ☐ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE: GARMENTS FOR LOCAL POPULATION AND SOME CARICOM COUNTRIES (SCHOOL UNIFORMS, FACTORY COVERALLS, SPECIAL ORDERS FOR USA.

CONSUMER ☐ INDUSTRIAL ☐

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐

MEDIUM TO LARGE BATCHES ☑ MEDIUM SIZED

7. PROCESS/TECHNOLOGICAL LEVEL:

		YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	DESIGN	☐	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS		☑	☐
SEMI-SKILLED/MANUAL		☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ..... 4 .....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: .....

NO. OF WORKERS IN PRODUCTION: ..... 65 .....

9. FINANCE: PRIVATE AND INSTITUTIONAL: PRIVATE AND INSTITUTIONAL .....

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10. SERVICES PERFORMED BY CTCS: (1) TIME AND MOTION STUDY

(2) FACTORY LAYOUT.

CLIENT HAD LABOUR PROBLEMS.

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☑ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☑ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

CLIENT HAS CAPACITY TO BEAR FULL COST.

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☐

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☑

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	✓	
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: PALMS PATISSERIE - ST. KITTS - GLORIA VEIRA & CARMEN OTTLEY

2. OWNERSHIP AND MANAGEMENT: PARTNERSHIP

3. SIZE: MICRO-ENTERPRISE

INVESTMENT: .....

EMPLOYEES: 4

SALES: EC $150,000/yr.

4. MARKET: DOMESTIC ☑ CARICOM ☐ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE:

PASTRIES.

CONSUMER ☑ INDUSTRIAL ☐

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☑

MEDIUM TO LARGE BATCHES ☐

7. PROCESS/TECHNOLOGICAL LEVEL:

	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☐	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☐	☐
SEMI-SKILLED/MANUAL	☑	☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☑

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	✓ ✓ ✓	
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: .....1.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: .....

NO. OF WORKERS IN PRODUCTION: .....5.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: .....

.....

10. SERVICES PERFORMED BY CTCS:

POTENTIAL - PREVIOUSLY APPROACHED DEVELOPMENT BANK FOR FINANCE AND TECHNICAL ASSISTANCE, BUT WAS "UNSUCCESSUL".

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☐ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☐ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☐ LONG ☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ...1.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: .....

NO. OF WORKERS IN PRODUCTION: .....3.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: .....

.....

10. SERVICES PERFORMED BY CTCS:

TO PROVIDE KNOW-HOW IN BAKING/PASTRIES.

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☑ SATISFIED ☐ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☑ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: LEEWARD SHRIMP COMPANY - ST. KITTS - L. BOWER, AN AQUACULTURE BREEDING AND-PROCESSING PLANT.

2. OWNERSHIP AND MANAGEMENT: SINGLE OWNER

3. SIZE: MICRO ENTERPRISE

INVESTMENT: SELF CONSTRUCTION

EMPLOYEES: 6 MAX.

SALES: US $150,000/yr.

4. MARKET: DOMESTIC ☑ CARICOM ☐ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE: SHRIMPS

CONSUMER ☑ INDUSTRIAL ☐

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐ 2000 lbs/pond/yr - 8 ponds.

MEDIUM TO LARGE BATCHES ☐

7. PROCESS/TECHNOLOGICAL LEVEL:

	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☑	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☐	☐
SEMI-SKILLED/MANUAL	☐	☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☐ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☐

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower		
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989 ST. KITTS

A. 1. NAME: ..ST. KITTS MASONRY PRODUCTS (SKMP).....

2. OWNERSHIP AND MANAGEMENT: SUBSIDIARY OF LOCAL CONGLOMERATE.....

.....

3. SIZE: ..SMALL SCALE.....

INVESTMENT: ..EC$. 1. MILLION PLUS.....

EMPLOYEES: ..10. - 15.....

SALES: .....EC $1.5 MILLION.....

4. MARKET: DOMESTIC ☑ CARICOM ☐ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE:

CONCRETE BLOCKS

CONSUMER ☐ INDUSTRIAL ☑

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐

MEDIUM TO LARGE BATCHES ☑

7. PROCESS/TECHNOLOGICAL LEVEL:

	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☐	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☑	☐
SEMI-SKILLED/MANUAL	☐	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: .....1.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: .....

NO. OF WORKERS IN PRODUCTION: .....10.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: .....

.....

10. SERVICES PERFORMED BY CTCS:

POTENTIAL CLIENT - QUALITY CONTROL/STANDARDS/SPECIFICATION

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☐ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☐ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☐ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☐ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☐

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower		
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: ISLAND BAKERIES - ST. KITTS

2. OWNERSHIP AND MANAGEMENT: SINGLE OWNER/MANAGER

3. SIZE: MICRO-ENTERPRISE

INVESTMENT: .....

EMPLOYEES: 6

SALES: EC $250,000

4. MARKET: DOMESTIC ☑ CARICOM ☐ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE:

GENERAL BAKERY PRODUCTS - SPECIAL PASTRIES (CROISSANTS, PATTIES).

CONSUMER ☐ INDUSTRIAL ☐

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☑

MEDIUM TO LARGE BATCHES ☐

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☐	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☐	☐
SEMI-SKILLED/MANUAL	☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ...1.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: .....

NO. OF WORKERS IN PRODUCTION: .....5.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: .....

.....

10. SERVICES PERFORMED BY CTCS:

TECHNICAL KNOW-HOW IN PRODUCTION OF CROISSANTS AND MEAT PATTIES.

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☐ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☐ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☐ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☑

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/	✓	
Confidence in know-how/ Trained Manpower	✓	
	✓	
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: DOMINICA COCONUT PRODUCTS - DOMINICA

2. OWNERSHIP AND MANAGEMENT: WIDE SPREAD SHAREHOLDING/LOCAL MARKET

3. SIZE: LARGE SCALE

INVESTMENT: PLANT TO BE RE-EVALUATED

EMPLOYEES: 165

SALES: EC$ 23 million

4. MARKET: DOMESTIC ☑ CARICOM ☑ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE:
1) Toilet soaps and detergents
2) Coconut oil (production in abeyance)Cost too high for competition
3) Coconut - secondary crop to bananas

CONSUMER ☑ INDUSTRIAL ☑

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐

MEDIUM TO LARGE BATCHES ☑

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☑	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☑	☐
SEMI-SKILLED/MANUAL	☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ...16.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: ....6.....

NO. OF WORKERS IN PRODUCTION: .....

9. FINANCE: PRIVATE AND INSTITUTIONAL: ..✓.....

.....

10. SERVICES PERFORMED BY CTCS: To solve problem (cracks) in blow moulded containers

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☑ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☑ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☐ FULL COST ☑ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☐

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☑

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	Solution not adequately tested as production discontinued	
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: NATIONAL DEVELOPMENT FOUNDATION - DOMINICA

2. OWNERSHIP AND MANAGEMENT: PRIVATE/NON-PROFIT DEVELOPMENT ORGANIZATION

3. SIZE: SMALL SCALE

INVESTMENT: DEPENDS UPON US AID AND EXTERNAL GRANTS AND FUNDS

EMPLOYEES: 11

SALES: LOANS OF EC$1,800,000 TO 517 SMALL AND MICRO ENTERPRISES

4. MARKET: DOMESTIC [X] CARICOM [ ] EXTRA-REGIONAL [ ]

5. PRODUCT/SERVICE: PROVIDING FINANCIAL AND TECHNICAL ASSISTANCE AND TRAINING TO SMALL AND MICRO SCALE INDUSTRIES

CONSUMER [ ] INDUSTRIAL [✓]

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES [ ]

MEDIUM TO LARGE BATCHES [ ]

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	[ ]	[ ]
HIGH CRAFTSMAN SKILLS/TECHNICIANS	[ ]	[ ]
SEMI-SKILLED/MANUAL	[ ]	[ ]

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ....3.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: ....6.....

NO. OF WORKERS IN PRODUCTION: .....3.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: USAID, CAIC/SEAP

OTHER INTERNATIONAL ORGANIZATIONS

.....

10. SERVICES PERFORMED BY CTCS: DEVELOPING COMPUTERISED SYSTEMS FOR NDF's LOAN PORTFOLIO

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☑ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☑ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☐

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☑

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	✓	
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: BENJASHOES PLASTIC COMPANY LTD. - DOMINICA

2. OWNERSHIP AND MANAGEMENT: FAMILY OWNED AND MANAGED

3. SIZE: SMALL SCALE

INVESTMENT: APPROX. US$250,000

EMPLOYEES: 10

SALES: NOT STATED

4. MARKET: DOMESTIC ☑ CARICOM ☑ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE: PLASTIC SHOES

CONSUMER ☑ INDUSTRIAL ☐

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐

MEDIUM TO LARGE BATCHES ☑

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☑	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☑	☐
SEMI-SKILLED/MANUAL	☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ....2.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: ....1.....

NO. OF WORKERS IN PRODUCTION: .....7.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: ✓

.....

10. SERVICES PERFORMED BY CTCS: TRAIN STAFF IN OPERATION OF INJECTION MOULDING MACHINE/DESIGN AND CONSTRUCT COOLING TOWER

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☐ SATISFIED ☑ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☑ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☑

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☐

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	✓	✓
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.		
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: MOREAU'S GARMENT MANUFACTURING CENTRE - DOMINICA

2. OWNERSHIP AND MANAGEMENT: FAMILY ENTERPRISE

3. SIZE: SMALL SCALE

INVESTMENT: EC$ 50,000 IN EQUIPMENT/ HIGH WORKING CAPITAL

EMPLOYEES: 33

SALES: NOT STATED

4. MARKET: DOMESTIC ☑ CARICOM ☐ EXTRA-REGIONAL ☑

5. PRODUCT/SERVICE: GENTS GARMENTS/INDUSTRIAL UNIFORMS
SOME OVERSEAS SUB-CONTRACTS - 807

CONSUMER ☑ INDUSTRIAL ☑

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐

MEDIUM TO LARGE BATCHES ☑

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☐	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☑	☐
SEMI-SKILLED/MANUAL	☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ....2.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: .....

NO. OF WORKERS IN PRODUCTION: ....33.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: ....X.....

.....

10. SERVICES PERFORMED BY CTCS: PRODUCTION LAYOUT/BASIC ACCOUNTING RECORDS/MAINTENANCE

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED ☑ SATISFIED ☐ DISSATISFIED ☐

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☑ ACCEPTABLE ☐ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☑

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	✓	✓
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.	✓	
3. MANAGEMENT		
Management & Supervisory Plan & Control.		
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.	✓	
Production Plan & Control/Productivity Gains.		

DATA COLLECTED IN INTERVIEWS/SITE VISITS WITH USERS OF CTCS SERVICE,

FEBRUARY - MARCH, 1989

A. 1. NAME: PAUL JOSEPH AND COMPANY - DOMINICA

2. OWNERSHIP AND MANAGEMENT: SINGLE OWNER/MANAGER

3. SIZE: SMALL SCALE

INVESTMENT: EC$1,000,000 PLUS (Equipment and Building)

EMPLOYEES: 10

SALES: Not stated

4. MARKET: DOMESTIC ☑ CARICOM ☑ EXTRA-REGIONAL ☐

5. PRODUCT/SERVICE:
1) Production of Pasta Products
2) Production of HDPE Film
3) Flexographic colour printing operation

CONSUMER ☑ INDUSTRIAL ☐

6. TYPE OF OPERATION:

ONE-OFF OR VERY SMALL BATCHES ☐

MEDIUM TO LARGE BATCHES ☑

7. PROCESS/TECHNOLOGICAL LEVEL:	YES	NO
SCIENTIFIC OR TECHNOLOGICAL COMPLEXITY	☐	☐
HIGH CRAFTSMAN SKILLS/TECHNICIANS	☑	☐
SEMI-SKILLED/MANUAL	☑	☐

8. PERSONNEL:

NO. OF MANAGERIAL AND SUPERVISORY STAFF: ....1.....

NO. OF SCIENTIFIC AND TECHNICAL STAFF: .....

NO. OF WORKERS IN PRODUCTION: .....9.....

9. FINANCE: PRIVATE AND INSTITUTIONAL: ✓

.....

10. SERVICES PERFORMED BY CTCS: 1) PRODUCT/PROCESS PROBLEMS WITH PASTA
2) TRAINING & MAINTENANCE & OPERATION OF TWO COLOUR FLEXOGRAPHIC PRINTER
3) TO TRAIN STAFF IN OPERATION & MAINT. OF HDPE FILM EXTRUDER

11. CLIENT SATISFACTION WITH CONSULTANCY SERVICE.

VERY SATISFIED 1) ☑ SATISFIED ☐ DISSATISFIED 2, 3 ☑

12. TIMELINESS OF CTCS'S RESPONSE TO CLIENT'S REQUEST.

FAST ☐ ACCEPTABLE ☑ SLOW ☐

13. CLIENT'S VIEW ON DURATION OF VISITS.

SHORT ☐ MEDIUM ☑ LONG ☐

CONSULTANT FOR FILM AND PRINTING OPERATION WAS A MACHINE OPERATOR/ SUPERVISOR WITHOUT ADEQUATE PROCESS EXPERIENCE.

14. WOULD CLIENT MEET SHARED/FULL COST OF NEXT ASSIGNMENT (INDICATED AS APPROX. US $200/DAY).

COST SHARING 50% ☑ FULL COST ☐ CONDITIONAL ☐

15. AGE/DEGREE-OF-DEVELOPMENT OF ENTERPRISE:

INSTALLATION/START-UP/RUNNING-IN 0 - 18 MONTHS ☐

GROWTH TO NORMAL LEVEL OF ACTIVITY 2 - 5 YRS ☑

MATURITY/EXPANSION/UP-GRADING/DECLINE 5 YRS + ☐

16. ASSOCIATED/ATTRIBUTABLE BENEFIT IN FUNCTIONAL/OPERATING AREAS GAINED BY CLIENT AS A CONSEQUENCE OF CTCS ASSIGNMENT.

CLASSIFICATION OF BENEFIT:	DEGREE OF IMPROVEMENT/CHANGE	
	Significant Change (10-15%)/Satisfactory Improvement.	Major change/ (15-20%) Major Improvement.
1. TECHNOLOGICAL		
Product Quality/ Process Control/ Standardization/ Confidence in know-how/ Trained Manpower	✓	
2. ECONOMIC		
Profit/Sales/Operating Costs/Product Costs.	✓	
3. MANAGEMENT		
Management & Supervisory Plan & Control.	✓	
Marketing/Sales Plan & Control		
Accounting & Finance Plan & Control.		
Production Plan & Control/Productivity Gains.		